

Misc Report

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ONTARIO WATER RESOURCES COMMISSION

801 BAY STREET, TORONTO 5

A. M. SNIDER
Chairman

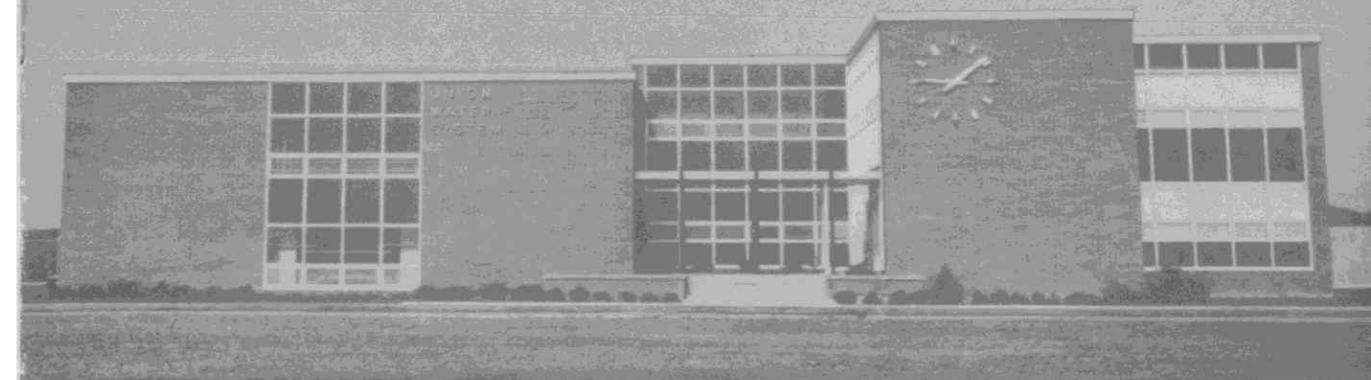
DR. A. E. BERRY
General Manager



ONTARIO

Water Resources

COMMISSION



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Major Activities

OF THE OWRC

- Supervises the operation of all water, sewage treatment and waste purification plants in Ontario, and lends technical assistance in this connection.
- Keeps close watch over stream pollution through examination of streams and sources of pollution. The Commission has the right of enforcement of any of its requirements to individuals, industries or municipalities in this regard.
- Advises municipalities concerning their water requirements and their needs in connection with sewage disposal and treatment.
- Reviews plans and approves or disapproves of all water and sewage projects to be undertaken by municipalities or persons.
- Constructs, finances and operates water and sewage works for Ontario municipalities on request.
- Advises concerning industrial wastes disposal projects to be undertaken by industry.
- Operates laboratory and research services in connection with problems relative to the fields of water, sewage and industrial wastes.
- Carries on a continual search for new ground water sources.
- Licences Ontario's well drillers.
- Administers plumbing regulations throughout the Province.
- Disseminates information on problems in water supply and wastes disposal.
- Administers the taking of water from any source.

Technical operations of the Commission are divided into five divisions—

- Laboratories and Research
- Construction
- Plant Operations
- Sanitary Engineering
- Water Resources



Introducing

THE ONTARIO WATER RESOURCES COMMISSION

In 1955, recognizing the increasing problems surrounding the availability of adequate and safe water supply and the effects of pollution on many of these waters, the Ontario Government set up a committee to investigate water supply and disposal of sanitary and industrial wastes. This was followed in 1956 by the creation of the Ontario Water Resources Commission.

At the 1957 session of the Legislature the scope of the Commission was widened considerably, and it began functioning with a program designed to deal effectively with water supplies and wastes disposal. Subsequent amendments have been made to improve the Act.

The Commission is made up of three to seven members, including a chairman, each appointed by the Lieutenant-Governor in Council. The Commission functions under the Minister of Municipal Affairs.

To carry out its program the Commission employs a staff headed by a general manager. Capable professional personnel deal with activities concerning water and water pollution, sewage and its proper disposal, availability of ground waters, construction of water and sewage works and disposal of industrial wastes. Many are almost continually in the field inspecting, testing, supervising and advising.

An experienced laboratory staff engaged in water testing, and examination of sewage and waste specimens, and in research function in the new laboratory on Highway 401 west of the Humber River.



Chairman
A. M. SNIDER
Waterloo

MEET THE COMMISSIONERS



W. D. CONKLIN, Q.C.
Kingsville



JOHN ROOT, M.P.P.
Orton



R. M. SIMPSON
Arnprior



DR. J. A. VANCE
Woodstock



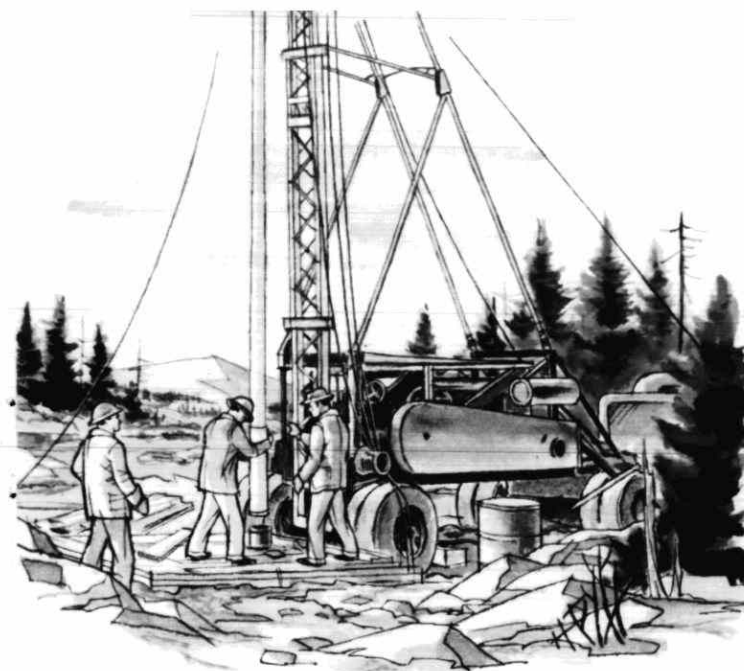
A. A. WISHART, Q.C.
Sault Ste. Marie



DR. A. E. BERRY
General Manager and Chief Engineer



W. S. MACDONNELL
Commission Secretary



Water Resources

ACTIVITIES

As the words above and the name of the Commission imply, the water resources of Ontario are a major concern of the OWRC. Making the most beneficial use of available supplies becomes increasingly important in a rapidly developing country.

There is a Division of Water Resources, with Ground Water and Surface Water branches. The work of the Ground Water Branch is particularly important because of the fact that about 35 per cent of Ontario's population is dependent upon ground-water sources of supply.

This Branch is continually collecting and assembling ground-water and related geological data. These data come from three main sources—records from water-well drillers, measurement of observation wells, field surveys and investigations carried on by the staff of the Branch. This section of the Commission co-operates with municipalities and others interested in public water supplies from ground-water sources. The nature of this co-operation varies from advice on well problems and the occurrence of ground water to supervision of the placing of test holes and field pumping tests.

This Branch also makes provision for the annual licensing of the Province's water-well drillers and for regulation of well-drilling operations.

The programs of the Surface Water Branch are directed to the collection of information on water uses, requirements and resources. This is accomplished through county or area surveys undertaken in co-operation with other Commission sections. Further, specific studies are undertaken in other instances.

One section of The Ontario Water Resources Commission Act provides for regulating the taking of water from any source of water supply. A permit is required where more than 10,000 gallons is taken in any day. The section does not apply to water systems existing prior to enactment of the section or to water taken for use for domestic or farm or fire-fighting purposes.

LABORATORY

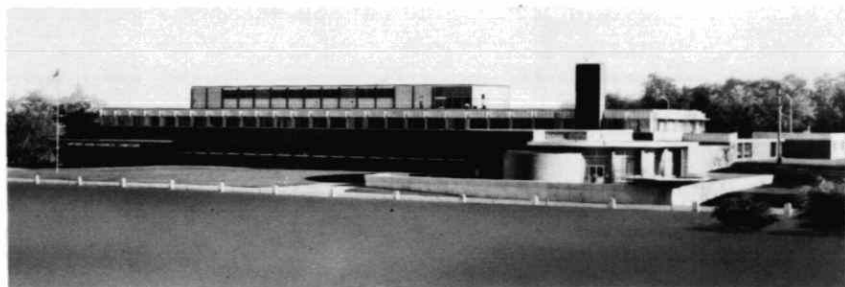
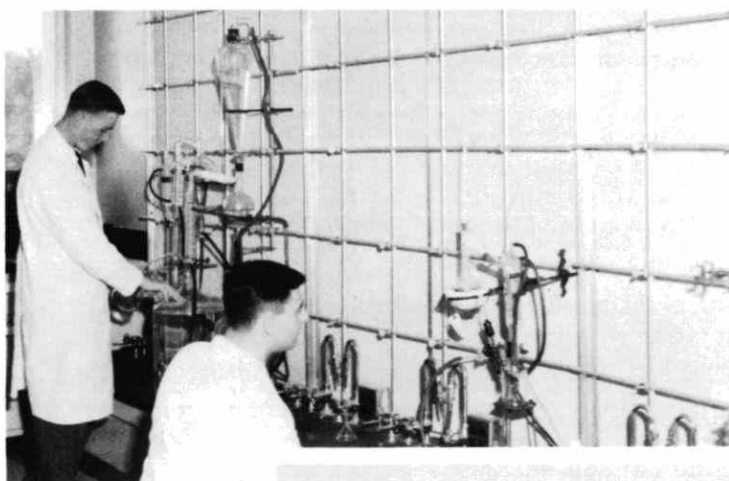
and Research

The OWRC operates laboratory and research facilities, and the laboratory in Etobicoke Township in Metropolitan Toronto is a key part of the Commission's efforts. Its active program includes routine water sampling and water testing procedures and examination of sewage and industrial waste specimens while much fundamental and applied research is carried on. This research is especially pertinent to the many problems in the treatment of industrial wastes.

Industrial wastes create a difficult situation. They are complex in nature, and methods of treatment are often not well established. The Commission's policy is to give every assistance to industry in solving its problems.

Close co-operation is maintained with other research institutions. A biological section is maintained for study of the effects of pollution on life in lakes and rivers, and special studies are undertaken on current problems.

All laboratory facilities are available to Ontario municipalities for improvement in efficiency and economical operation of water and sewage plants. Facilities are available for courses of instruction in treatment plant operation and for conferences of many kinds.



CLEAN, ADEQUATE WATERS

for Ontario

The provision of an environment which will promote the best living conditions for all should be—in fact must be—the objective of everyone.

Such an objective involves, among other things, the safeguarding of health, good general sanitary conditions, safe and adequate water supplies and acceptable means for disposal of sewage and industrial wastes so that receiving streams will not become polluted and useless.

Any program designed to reach such an objective must be most comprehensive, and calls for co-operative effort by provincial and municipal authorities and the citizens at large.

Problems encountered in the attainment of such an objective have faced authorities for many years, with the situation by no means helped by increasing costs of material and labor and high interest rates. Further aggravation came from mushrooming growth of many towns, cities and new communities.

In the creation of the desired environment water supplies are a major factor. Little progress can be made if water is either inadequate or of unsatisfactory quality. As the population grows the need for water in all phases of personal, communal and industrial life becomes increasingly important. With water in short supply expansion becomes impossible and human welfare suffers accordingly.

Water supplies and waste disposal are closely linked. They both should be dealt with in any program designed to attain the environment desired by all.



This is where the Ontario Water Resources Commission comes in. The Commission is thoroughly appreciative of the needs and of the practical problems to be overcome in meeting those needs. It has definite objectives in a program designed to assist municipalities in solving difficulties arising from the need for water supplies and the disposal of sewage and other wastes.

The Water Commission's objectives are twofold in nature. One is to ensure maintenance of public water supplies in a safe condition for domestic consumption and for other uses—and this, naturally, includes proper treatment of sanitary and industrial wastes before they are discharged into streams or lakes.

The second objective is to make it possible for municipalities to finance modern water and sewage treatment works. The Commission program has been designed to aid in the construction and financing of these works for any municipality or for any area in which there is a need.

Involved in the reaching of Commission objectives is a huge program. At the time the Ontario Water Resources Commission Act, 1957, came into being following approval of Bill 164 by the Legislature it was estimated that 2.4 billion dollars from all sources would be required over a 20-year period to meet water and sewage works requirements of the Province.



- it can become a partner in an advantageous scheme where two or more municipalities get the Commission to build and operate for them a joint water supply or sewage treatment project;
- it has the option, at the conclusion of the repayment period, of taking over the works together with a sinking fund, established at the start of operations, with the accumulated interest on that fund, as well as any sum outstanding in a reserve account maintained for special contingencies;
- it can take advantage of financial aid offered by any other agency to municipalities wishing to build sewage treatment works and still benefit from Commission's activities by appointing the OWRC its agent in such matters and obtaining Commission financing for the parts not covered by other loans.

The operation of works constructed by the Commission is under a staff of engineering specialists. A key feature of such arrangements, however, is the active participation of a local advisory committee appointed by the municipality itself to work with the Commission in the administration and operation of the project. This close co-operation has been found to be of the utmost importance and a most effective and satisfactory arrangement. All matters related to the undertaking are discussed with the advisory committee at regular meetings.

While it is true that the municipalities in the end result pay for OWRC-constructed projects, they, at the same time, benefit from the Commission's free services. In connection with construction works, the Commission makes no charge for its administration activities, including inspection while under construction, accounting and other office facilities.

Through the Division of Plant Operations municipalities with OWRC projects have the advantage of a trained staff of engineers and technicians who provide continuous and efficient service in regard to such projects.

Further, services of the Division of Laboratories and Research and the Division of Water Resources are carried on free of charge on behalf of municipalities, industries and individuals.



Commission-Municipal

RELATIONSHIPS

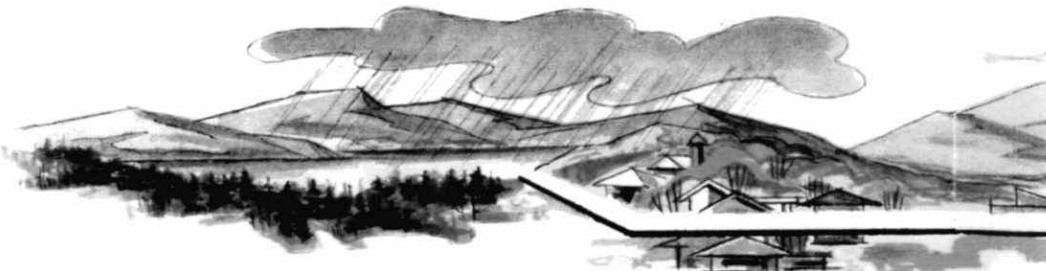
The Commission is in a position to advise and aid municipalities in respect to all aspects of water supply and sewage disposal. In fact, no municipal works of this nature, or extensions or alterations to existing works may be undertaken without Commission approval.

Municipalities requiring water and/or sewage works may arrange for construction of such works themselves or they may ask the Commission to handle these projects. Those in the latter category benefit in numerous ways—planning, construction, financing and operation. Thus the Commission will undertake responsibility for the engineering and construction, and then operate the works and maintain them in proper condition.

However, whether the water or sewage facilities are provided by the Commission or the municipality itself, the assistance of OWRC staff is always available.

When a municipality undertakes an agreement with the Commission—

- it does not have to sell debentures;
- it does not require a vote of the ratepayers;
- it depends on the OWRC to finance the work through construction;
- it repays the Commission over an extended period of years by means of a sinking fund;
- its annual payments to the OWRC are invested and accumulated interest is credited to the debt-retirement account;
- it tends to obtain lower interest rates because of the effect of mass borrowings by the OWRC with the backing of the Ontario government;
- it benefits in other financial details such as possible deferment of initial capital payments;
- it can take advantage of such Commission services as instruction in the introduction of complete water billing and control procedures;
- it can set up a local advisory committee to work closely with the Commission in the administration and operation of a project;



HOW THE COMMISSION REACHES ITS OBJECTIVES

The Ontario Water Resources Commission Act, 1957, subsequently amended gives the Commission wide powers to reach its objectives.

For instance, Section 16 of the Act reads as follows:

- “(1) Notwithstanding any other Act, it is the function of the Commission and it has power,
- “(a) to control and regulate the collection, production, treatment, storage, transmission, distribution and use of water for public purposes and to make orders with respect thereto;
 - “(b) to construct, acquire, provide, operate and maintain water works and to develop and make available supplies of water to municipalities and persons;
 - “(c) to construct, acquire, provide, operate and maintain sewage works and to receive, treat and dispose of sewage delivered by municipalities and persons;
 - “(d) to make agreements with any one or more municipalities or persons with respect to a supply of water or the reception, treatment and disposal of sewage;
 - “(e) to conduct research programs and to prepare statistics for its purposes; and
 - “(f) to perform such other functions or discharge such other duties as may be assigned to it from time to time by the Lieutenant-Governor in Council.
- “(2) Every person who contravenes or fails to comply with any order made under clause (a) of subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than \$100 for every day or part thereof during which such contravention or failure continues.”

Supervision over all waters is given the Commission by Section 26, subsections (1) and (2) of the Act which reads:

- “(1) The Commission has the supervision of all surface waters and ground waters in Ontario used as a source of water supply.
- “(2) The Commission may examine any surface waters or ground waters in Ontario from time to time to determine what, if any, pollution exists and the causes thereof.”

In regard to water works, the Act says in Section 30:

"Water works shall at all times be maintained, kept in repair and operated in such manner and with such facilities as may be directed from time to time by the Commission."

In regard to sewage works, the Act says in Section 37:

"Sewage works shall at all times be maintained, kept in repair and operated in such manner and with such facilities as may be directed from time to time by the Commission."

Section 27 of the Act contains an instance of legislative "teeth" to help the Commission in its anti-pollution crusade. It reads:

"(1) Every municipality or person that discharges or deposits any material of any kind into or in any well, lake, river, pond, spring, stream, reservoir or other water or watercourse, or on any shore or bank thereof or into or in any place that may impair the quality of the water of such well, lake, river, pond, spring, stream, reservoir or other water or watercourse is guilty of an offence and on summary conviction is liable to a penalty of not more than \$1,000 or to imprisonment for a term of not more than one year, or to both."

Further, Section 38 (2) of the Act provides that every municipality that fails to do every act and thing in its power to implement a report made to it by the Commission in connection with water works or sewage works is guilty of an offence and on summary conviction is liable to a penalty of \$500 for every day upon which such default continues after receipt of the report.

In connection with pollution abatement, the Commission is anxious to co-operate with any individual, municipality or industry with a problem. Each will be given an opportunity to work with the authorities whose aim is an abundant and clean water supply for the people of Ontario.



Sanitary Supervision

The mammoth job of giving sanitary supervision to all sewage and water works in Ontario as well as to all sources of water supply is the responsibility of the Commission's Division of Sanitary Engineering. In addition all plans for water and sewage works installations or extensions to existing works require the approval of this Division before construction can be undertaken.

The Commission is given wide powers to protect the safety of water supplies and its relentless fight against water pollution is the responsibility of the Division of Sanitary Engineering.

Water pollution, as far as the Commission is concerned, involves anything which may impair the quality of the water.

The Division of Sanitary Engineering investigates all cases of pollution as they become known. The trouble is traced to the source and every effort is made to persuade the offender—industry, municipality or individual—to remedy the situation. In difficult situations the laboratory and research services of the OWRC are used to help find a remedy. If the remedy is obvious and the offender fails to co-operate, the Commission has the legislative right to take the offender to court. And, the Commission will resort to the courts if there is no other way to get pollution situations remedied in reasonable periods of time.

